

S E C T I O N

# 11

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## **Other services**

**Dialysis**

**Hospice**

**Durable medical equipment**

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**Chart 11-1. Total number of dialysis facilities is growing; for profit and freestanding are a higher share over time**

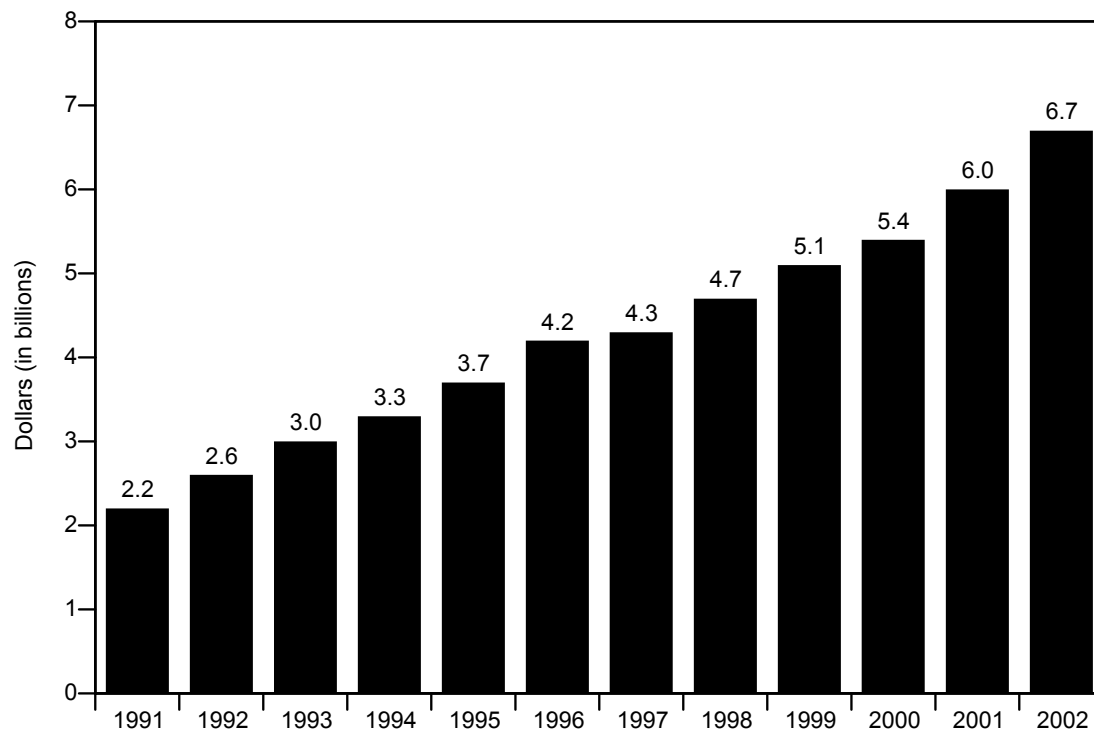
	1993		1995		1997		1999		2002		1993–2001
	Providers	%	Providers	%	Providers	%	Providers	%	Providers	%	Annual percent change
Total	2,343	100%	2,732	100%	3,172	100%	3,619	100%	4,132	100%	6.5%
For profit	1,424	61	1,766	65	2,255	71	2,796	77	3,279	80	9.7
Nonprofit	919	39	859	35	917	29	823	23	847	21	–0.9
Freestanding	1,640	70	2,013	74	2,441	77	2,920	81	3,438	83	8.6
Hospital based	703	30	719	26	731	23	699	19	694	17	–0.1
Urban, in an MSA	1,812	77	2,098	77	2,398	76	2,718	75	3,098	75	6.1
Rural	531	23	634	23	774	24	601	25	1,034	25	7.7

Note: MSA (metropolitan statistical area). Numbers may not sum due to rounding.

Source: Compiled by MedPAC from the 1993–2001 facility survey from CMS.

- Between 1993 and 2002, the number of freestanding and for-profit facilities increased and hospital-based and nonprofit facilities decreased. Freestanding facilities increased from 70 to 83 percent of all facilities, and for-profit facilities increased from 61 to 80 percent of all facilities.
- During this time, the proportion of facilities located in rural areas has remained relatively constant.
- Specific information about each dialysis facility can be found on the CMS website, available at <http://www.medicare.gov/Dialysis/Home.asp>.

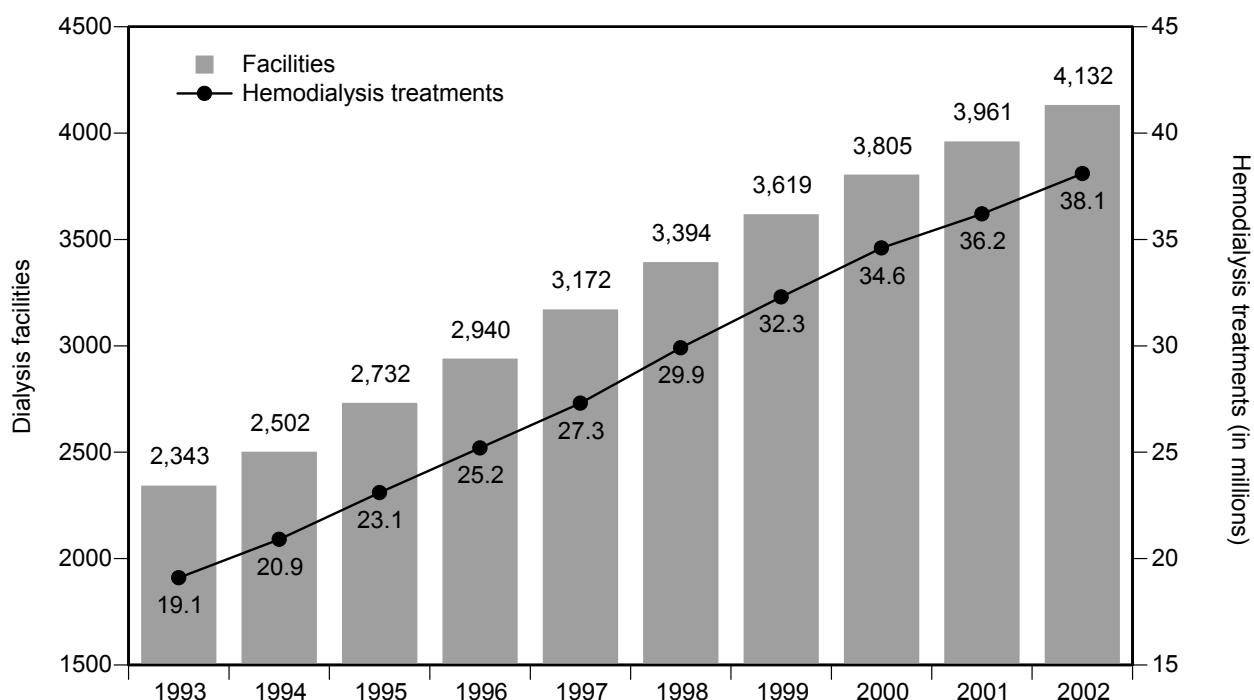
**Chart 11-2. Medicare spending for outpatient dialysis services furnished by freestanding dialysis facilities, 1991–2002**



Source: CMS, Office of the Actuary, 2004.

- Between 1991 and 2002, Medicare spending for both dialysis treatments (for which providers are paid a predetermined rate) and for injectable drugs administered during treatments (for which providers are paid on a per-unit basis) increased by about 11 percent per year.
- Two factors contributing to spending growth are the increasing size of the dialysis population and the diffusion of new technologies.
- The number of dialysis patients increased by 6 percent annually between 1996 and 2002. This growth is linked to a number of factors, including improvements in survival as well as increases in the number of people with diabetes, a risk factor for end-stage renal disease.
- New technologies—particularly injectable drugs such as erythropoietin, iron supplements, and vitamin D analogues—have also contributed to the growth in spending.
- Between 1996 and 2002, estimated spending for injectable drugs increased by 17 percent annually; in contrast, spending for dialysis increased by 6 percent annually.

**Chart 11-3. Dialysis facilities' capacity has increased steadily between 1998 and 2002**



Source: Compiled by MedPAC from the 1993–2002 facility file from CMS.

- Providers have met the demand for furnishing care to an increasing number of dialysis patients by opening new facilities. In 2002, a facility provided over 9,000 treatments on average.
- Between 1993 and 2002, the total number of dialysis facilities grew by about 6.5 percent annually, and the number of hemodialysis treatments grew by 8 percent annually.
- Specific information about each dialysis facility can be found on the CMS website, available at <http://www.medicare.gov/Dialysis/Home.asp>.

## Chart 11-4 A disproportionate number of dialysis facilities that closed were small, nonprofit, and hospital based

Characteristics of facilities	Between 1998 and 2002	
	Opened facilities	Closed facilities
Mean number of hemodialysis stations	17.2	12.8
Percent of all facilities:		
Nonprofit	20%	43%
Hospital based	17	49
Rural	26	28
In HPSAs	10	10
Percent of households receiving public assistance	22	22
Percent of population that were African American	15	15

Note: HPSA (health professional shortage area).

Source: Compiled by MedPAC from the 1998–2002 Facility Survey file from CMS and from the Bureau of the Census.

- Between 1998 and 2002, there was a net increase of 738 dialysis facilities. Of the facilities that closed during this time, a disproportionate number of them were small, nonprofit, and hospital based. This finding is consistent with the changes in the characteristics of dialysis facilities in the 1990s and through 2002.
- Because closures were not disproportionately in these areas, beneficiaries should not be having problems accessing care in rural areas, health professional shortage areas, lower-income areas, or areas where a higher proportion of minorities reside.

**Chart 11-5. The quality of dialysis care has improved for some measures**

Outcome measure	1998	1999	2000	2001
Percent of in-center hemodialysis patients:				
Receiving inadequate dialysis	20	16	14	11
With low anemia levels	41	32	26	24
Who are malnourished	18	20	20	18
Dialyzed with an AV fistula	26	27	30	31
Percent of peritoneal patients:				
Receiving inadequate CAPD	45	32	31	32
Receiving inadequate CCPD	42	35	38	30
With low anemia levels	38	31	27	24
Who are malnourished	41	44	44	39

Note: AV (arteriovenous), CAPD (continuous ambulatory peritoneal dialysis), CCPD (continuous cycler-assisted peritoneal dialysis). The two predominant types of peritoneal dialysis are CAPD and CCPD. The share of all dialysis patients treated with peritoneal dialysis has declined from 13 to 10 percent between 1998 and 2001; nearly all other dialysis patients were treated with in-center hemodialysis during this time. Comparing the outcomes between hemodialysis and peritoneal dialysis is complicated because the data presented above are not adjusted for differences in the demographic and clinical characteristics of these patient groups.

Source: 1999–2002 Annual Report for ESRD Clinical Performance Measures Project from CMS.

- The quality of dialysis care has improved for some measures. Between 1998 and 2001, the proportion of both hemodialysis and peritoneal patients receiving inadequate dialysis and having low anemia levels declined.
- Nutritional care is a clinical area in which substantial improvements in quality are needed. The proportion of hemodialysis and peritoneal dialysis patients who are malnourished has remained relatively constant during this time.
- All hemodialysis patients require vascular access—the site on the patient’s body where blood is removed and returned during dialysis. Vascular access care is another clinical area in which substantial improvements in quality are needed. Use of arteriovenous (AV) fistulas, considered the best type of vascular access, increased slightly from 26 to 31 percent of hemodialysis patients between 1998 and 2001. Clinical guidelines recommend that at least 40 percent of all hemodialysis patients have an AV fistula.
- More information about Medicare’s quality initiatives for dialysis care can be found on the CMS website, available at <http://www.cms.hhs.gov/esrd/3.asp>.

**Chart 11-6. The ESRD population is growing; most patients undergo hemodialysis**

	1993		1997		2001	
	Patients (thousands)	%	Patients (thousands)	%	Patients (thousands)	%
Total	241.6	100%	330.8	100%	406.1	100%
Dialysis	174.9	72	242.0	73	292.2	72
In-center hemodialysis	143.3	59	205.4	62	263.6	65
Home hemodialysis	0.7	<1	1.8	<1	1.1	<1
Peritoneal dialysis	26.5	11	28.4	9	24.7	6
Unknown	4.4	2	6.4	2	2.8	1
Functioning graft and kidney transplants	66.7	28	88.9	27	113.9	28

Note: ESRD (end-stage renal disease).

Source: Compiled by MedPAC from the United States Renal Data System.

- Persons with end-stage renal disease (ESRD) require either dialysis or a kidney transplant to maintain life. The total number of patients increased by 7 percent annually between 1993 and 2001.
- In hemodialysis, a patient's blood flows through a machine with a special filter that removes wastes and extra fluids. In peritoneal dialysis, the patient's blood is cleaned by using the lining of his or her abdomen as a filter. Peritoneal dialysis is usually performed in a patient's home.
- Most ESRD patients undergo hemodialysis administered in dialysis facilities three times a week. Hemodialysis use is growing and use of the two types of dialysis administered in patients' homes—peritoneal dialysis and home hemodialysis—is declining.
- Functioning graft patients are patients who have had a successful kidney transplant. Patients undergoing kidney transplant may receive either a living or a cadaveric kidney donation. Of the 15,331 kidney transplants performed in 2001, 40 percent of the kidneys were from living donors and 60 percent were from cadaver donors.
- This table includes both patients who are and are not Medicare eligible. In 2001, about 96 percent of dialysis patients were Medicare eligible; Medicare was the primary payer for about half of all kidney transplants.
- Information on the incidence and prevalence of patients with renal disease can be found on the US Renal Data System website, available at <http://www.usrds.org>.



**Chart 11-7. Diabetics and the elderly are the fastest growing segments of the hemodialysis population**

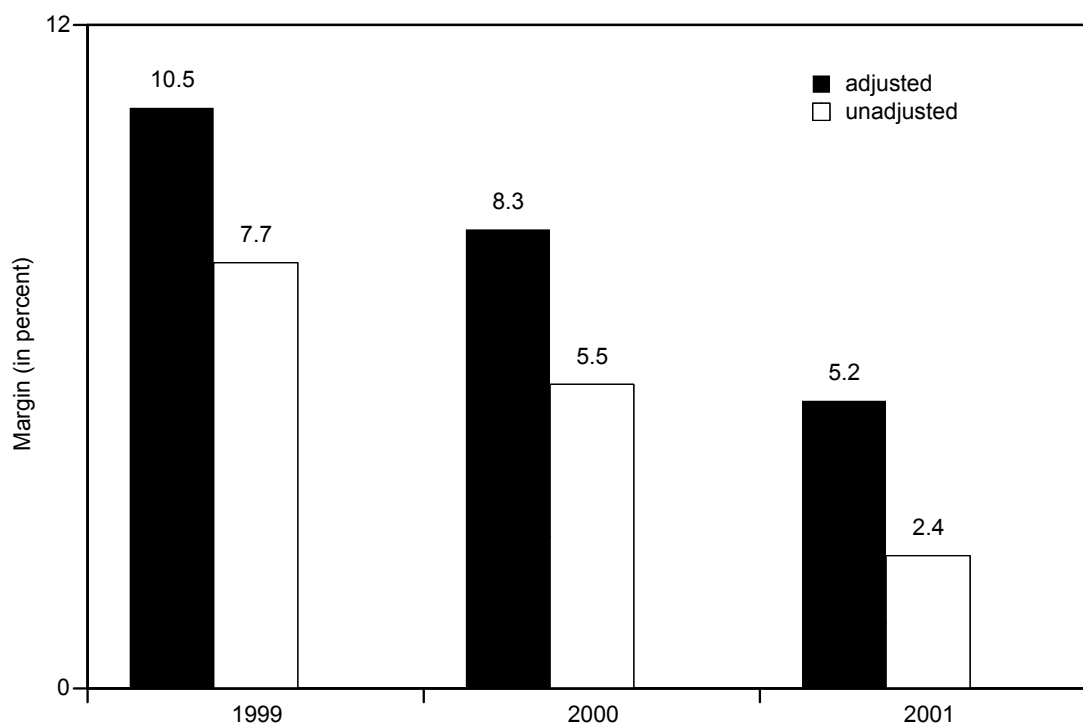
	Percent of total in 2001	Annual percent change 1996–2001
Total (264,710)	100%	6.8%
Age		
0–19	< 1	4.8
20–44	16	4.4
45–64	39	8.0
65–74	24	5.0
75+	21	9.2
Male	53	7.3
Female	47	6.3
White	54	7.5
African American	38	5.7
Native American	2	5.3
Other	6	9.4
Underlying cause of ESRD		
Diabetes	42	9.9
Hypertension	28	6.1
Glomerulonephritis	11	4.4
Other causes	20	3.7

Note: ESRD (end-stage renal disease). The above data include both Medicare-eligible and non-Medicare-eligible dialysis patients. In 2001, about 96 percent of dialysis patients were Medicare-eligible. Numbers may not sum due to rounding.

Source: Compiled by MedPAC from the United States Renal Data System, 2002.

- Among hemodialysis patients, about half are over age 65, male, and white.
- Diabetes is the most common cause of renal failure.
- The number of hemodialysis patients increased by about 7 percent annually between 1996 and 2001. The two fastest growing groups of hemodialysis patients are those who are over age 75 and those with diabetes as the cause of kidney failure.
- Information on the incidence and prevalence of patients with renal disease and their demographic and clinical characteristics can be found on the US Renal Data System website, available at <http://www.usrds.org>.

**Chart 11-8. Medicare margin for outpatient dialysis services, adjusted and unadjusted, 1999–2001**



Note: The Medicare margin includes payments and costs for both composite rate services and injectable drugs.

Source: MedPAC analysis of 1999–2001 cost report data and outpatient institutional claims of freestanding dialysis facilities from CMS.

- Payment relative to providers' cost declined between 1999 and 2001. The composite rate was updated 1.2 percent in 2000 and 2.4 percent in 2001. During this time, providers' costs for services in the composite rate bundle increased by 4.4 percent annually and the cost for the most frequently used injectable drug—erythropoietin—increased in 2000 and 2001, while the per unit payment rate remained unchanged.
- Nonetheless, in 2001, aggregate payments for both dialysis services and separately billable injectable drugs exceeded providers' costs by about 5 percent, after adjusting for the most recent audited cost report data, which shows that the allowable cost per treatment was about 96 percent of the costs reported by providers.
- More information about the financial performance of dialysis facilities can be found in Chapter 2E of the MedPAC March 2004 Report to the Congress, available at [http://www.medpac.gov/publications/congressional\\_reports/Mar04\\_Ch2.pdf](http://www.medpac.gov/publications/congressional_reports/Mar04_Ch2.pdf).

## Chart 11-9. Lower costs per dialysis treatment do not result in quality problems for beneficiaries

Quality measure and quartile	URR>65%	HCT>33%	Mortality rate	Transplant rate
Composite rate costs only				
Q1	85%	70%	16%	2.2%
Q2	85	69	17	2.3
Q3	85	70	17	2.4
Q4	84	70	17	2.5
Both composite rate and injectable drug costs				
Q1	87	70	17	2.1
Q2	85	70	16	2.4
Q3	84	69	17	2.3
Q4	83	69	17	2.5

Note: Q (quartile), URR (urea reduction ratio), HCT (hematocrit). Lowest cost quartile is 1, highest is 4.

Source: Direct Research, LLC, from cost reports and Part B claims submitted by freestanding dialysis facilities for services furnished in 2000.

- Quality of care does not significantly differ between facilities with lower and higher costs for dialysis services included in the prospective payment bundle after adjusting for patient and facility characteristics.
- Considering both the costs for furnishing dialysis and separately billable drugs, beneficiaries' outcomes are poorer for facilities with higher than average costs after adjusting for patient and facility characteristics. One interpretation is that since drugs are currently paid on a per dose basis, some providers may not furnish these drugs as efficiently as if they were paid for prospectively. Alternatively, this finding may suggest that higher-cost facilities may be furnishing care to more medically complex beneficiaries.
- More information about the relationship between quality of care and providers' costs can be found in Chapter 6 of the MedPAC June 2003 Report to the Congress, available at [http://www.medpac.gov/publications/congressional\\_reports/June03\\_Ch6.pdf](http://www.medpac.gov/publications/congressional_reports/June03_Ch6.pdf).

**Chart 11-10. The number of freestanding and for-profit hospices has increased the most**

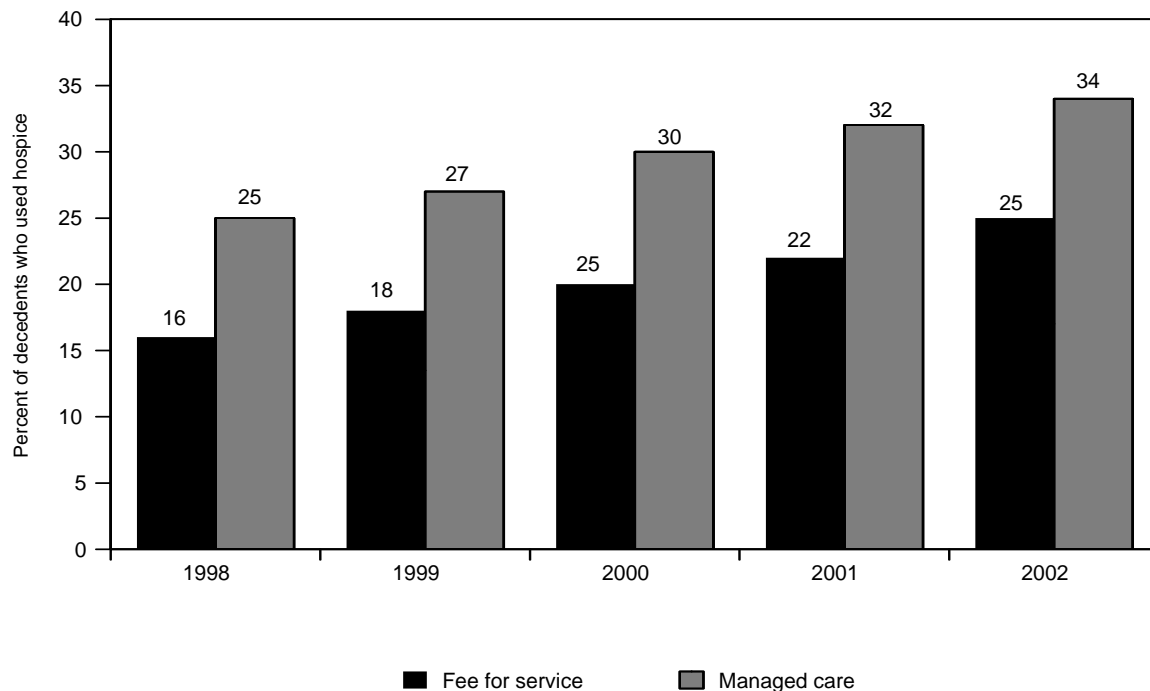
	Number of hospice facilities			Percent change 2001–2003
	2001	2002	2003	
All hospices	2,266	2,323	2,454	8%
Hospice type				
Freestanding	949	1,067	1,222	29
HHA based	744	677	653	–12
Hospital based	553	560	562	2
SNF based	20	19	19	–20
Ownership				
Not for profit	1,340	1,339	1,384	3
For profit	706	762	883	25
Government	187	188	189	1
Other	35	34	34	–3

Note: SNF (skilled nursing facility), HHA (home health agency).

Source: MedPAC analysis of unpublished data from CMS.

- The Medicare hospice benefit is specifically targeted to Medicare beneficiaries with a terminal illness. It covers a broad set of palliative services for beneficiaries whose physicians have determined that, if their illness runs a normal course, they have a life expectancy of six months or less. To elect the hospice benefit, beneficiaries must agree to forgo curative treatment for their terminal condition. The vast majority of hospice care is provided in patients' residences (i.e., their home or their nursing home).
- The number of hospices increased dramatically between 1992 and 1998 from 1,208 hospices to 2,281. Except for a decline in 2000 (when the number of home health agencies declined steeply), the number of hospice agencies has grown each year over the last decade.
- Hospice volume—measured by the hospice census—has also increased. Over the last several years, the number of high-volume hospices has grown, but the number of low-volume hospices has fallen.
- Between 2001 and 2003, the number of for-profit hospices increased considerably more than hospices with other types of ownership. Specifically, the number of for-profit hospices grew by 25 percent, while the number of not-for-profit and government hospices grew only 3 and 1 percent, respectively.
- Similarly the growth in freestanding hospices (not owned by another type of provider) from 2001–2003 has been much higher (29%) than other types (owned by home health agencies, hospitals and skilled nursing facilities).
- Additional information and analysis related to the Medicare hospice benefit can be found in Chapter 6 of the MedPAC June 2004 Report to the Congress, available at [http://www.medpac.gov/publications/congressional\\_reports/June04\\_ch6.pdf](http://www.medpac.gov/publications/congressional_reports/June04_ch6.pdf).

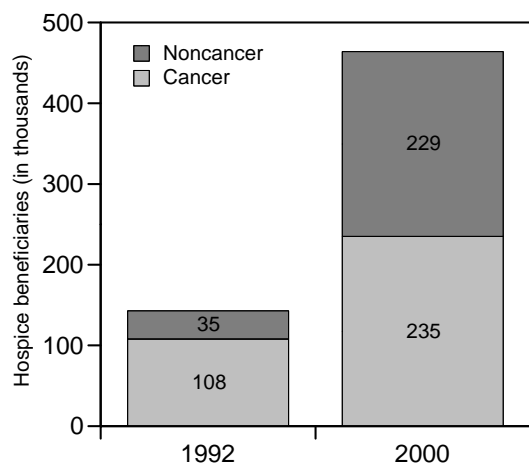
**Chart 11-11. Hospice use has grown and remains higher for decedents in managed care**



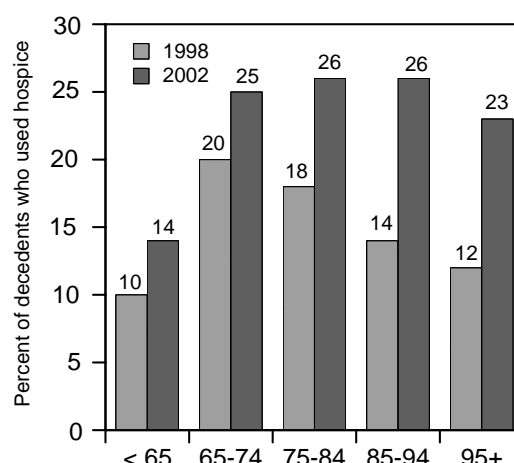
Source: MedPAC analysis of 5 percent enrollee database from CMS, 2003.

- From 1998 to 2002, the total percentage of beneficiaries using hospice in the year before they died grew from 20 percent to 26 percent. Beneficiaries in managed care are more likely to use hospice care than beneficiaries in the fee-for-service program. Between 1998 and 2002, the percentage of beneficiaries who used hospice before they died grew from 25 percent to 34 percent in managed care, and from 16 percent to 25 percent in fee-for-service.
- Additional information and analysis related to the Medicare hospice benefit can be found in Chapter 6 of the MedPAC June 2004 Report to the Congress, available at [http://www.medpac.gov/publications/congressional\\_reports/June04\\_ch6.pdf](http://www.medpac.gov/publications/congressional_reports/June04_ch6.pdf).

**Chart 11-12. Growth in hospice use is greatest among beneficiaries with noncancer diagnoses and those who are older**



Source: Direct Research, LLC.

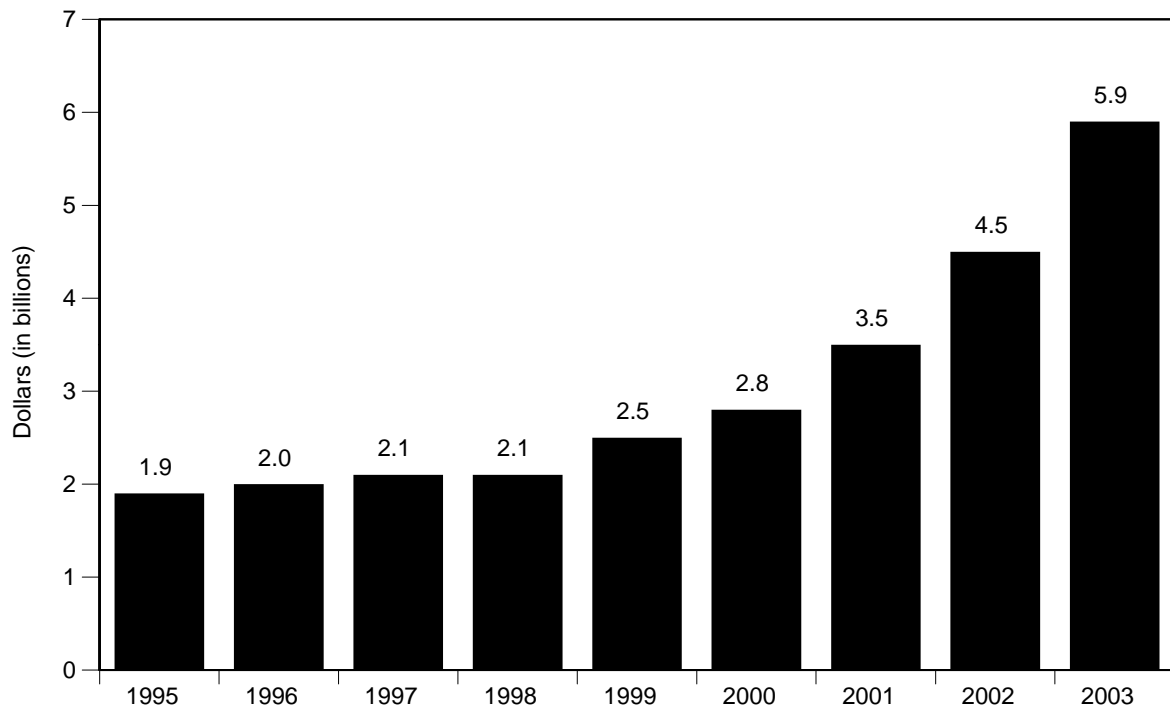


Note: Excludes beneficiaries in managed care.

Source: MedPAC analysis of 5 percent enrollee database from CMS, 2003.

- Growth in the use of hospice has occurred among beneficiaries in all age, race, and sex groups.
- Growth in hospice use has been fastest among older Medicare decedents. Between 1998 and 2002, the share of beneficiaries age 95 or older who died while in hospice care rose from 12 percent to 23 percent.
- The growing use of hospice by the oldest Medicare decedents is consistent with findings that hospice use has increased considerably among decedents in nursing facilities. From 1992 to 2000, use of hospice by decedents in nursing facilities grew from 11 percent to 36 percent.
- The share of hospice patients with noncancer diagnoses has grown to be about half the hospice population. The three most common noncancer diagnoses for hospice patients are congestive heart failure, dementia, and lung disease.
- Additional information and analysis related to the Medicare hospice benefit can be found in Chapter 6 of the MedPAC June 2004 Report to the Congress, available at [http://www.medpac.gov/publications/congressional\\_reports/June04\\_ch6.pdf](http://www.medpac.gov/publications/congressional_reports/June04_ch6.pdf).

**Chart 11-13. Recently, Medicare spending for hospice services has increased sharply**



Source: CMS Office of the Actuary.

- Consistent with increases in the number of hospice users, Medicare spending for hospice care has increased. Spending has grown from an estimated \$3.5 billion in 2001 to \$5.9 billion in 2003—a 30 percent average annual increase.
- Medicare makes daily (per diem) payments to hospice agencies for each day a beneficiary is enrolled in the hospice benefit. Payments are made through a fee schedule with four different levels of care: routine home care, continuous home care, inpatient respite care, or general inpatient care. The majority of care—95 percent—is provided at the routine home care level.

## Chart 11-14. Median stays remain stable while long stays grow rapidly

	Length of stay (in days)			
	Mean	25 <sup>th</sup> percentile	Median	90 <sup>th</sup> percentile
1998	52	6	18	123
1999	51	6	17	129
2000	51	6	16	130
2001	50	6	16	133
2002	55	5	16	147

Source: MedPAC analysis of 5 percent enrollee database from CMS, 2003.

- In most cases, a beneficiary's length of enrollment in hospice is determined by the number of days a beneficiary lives after electing the hospice benefit.
- Between 2001 and 2002, the average length of enrollment for a beneficiary in hospice care increased from 50 days to 55 days, but the median remained 16 days.
- A consistent subset of the hospice population has short lengths of stay. From 1998 to 2002, more than 25 percent of hospice beneficiaries were enrolled in hospice for less than a week.
- Long stays are getting longer. The length of stay at the 90<sup>th</sup> percentile has steadily increased. The increased prevalence of nursing home residents in the hospice population may be a factor in this long-stay trend.
- Additional information and analysis related to the Medicare hospice benefit can be found in Chapter 6 of the MedPAC June 2004 Report to the Congress, available at [http://www.medpac.gov/publications/congressional\\_reports/June04\\_ch6.pdf](http://www.medpac.gov/publications/congressional_reports/June04_ch6.pdf).



## Chart 11-15. Program payments are growing rapidly for durable medical equipment

	2000	2001	2002	2000–2002
Category	Payment (millions)	Payment (millions)	Payment (millions)	% change in payments
Total	\$4,629	\$5,417	\$6,480	40%
Medical/surgical supplies	635	728	848	34
Hospital beds	340	364	380	12
Oxygen and supplies	1,392	1,543	1,734	25
Wheelchairs	619	792	1,121	81
Orthotic devices	615	739	877	43
Other	1,028	1,251	1,522	48

Note: Beneficiaries are responsible for a 20 percent copayment for durable medical equipment.

Source: MedPAC analysis of CMS data, May 5, 2003. Available at <http://www.cms.hhs.gov/data/betos/cy2001.asp>.

- Spending on durable medical equipment (DME) grew 40 percent between 2000 and 2002. The fastest growing categories are wheelchairs (81 percent) and other (48 percent). Other includes drugs used with DME, such as albuterol.
- Additional historic Medicare Part B physician and supplier data can be found on the CMS website, available at <http://www.cms.hhs.gov/data/betos>. Information on competitive bidding can be found at <http://www.cms.hhs.gov/healthplans/research/dmebid.asp> and [http://www.medpac.gov/publications/congressional\\_reports/June03\\_Ch8.pdf](http://www.medpac.gov/publications/congressional_reports/June03_Ch8.pdf).

## Web links. Other services

### Dialysis

- The US Renal Data System provides information about the incidence and prevalence of patients with renal disease, their demographic and clinical characteristics, and their spending patterns.

<http://www.usrds.org>

- The National Institute of Diabetes & Digestive & Kidney Diseases and the National Kidney Foundation provide health information about kidney disease for consumers.

<http://www.niddk.nih.gov/health/kidney/kidney.htm>

<http://www.kidney.org/>

- CMS provides specific information about each dialysis facility.

<http://www.medicare.gov/Dialysis/Home.asp>

- Chapter 2E of the MedPAC March 2004 Report to the Congress provides information about the financial performance of dialysis facilities.

[http://www.medpac.gov/publications/congressional\\_reports/Mar04\\_Ch2.pdf](http://www.medpac.gov/publications/congressional_reports/Mar04_Ch2.pdf)

- MedPAC's October 2003 report describes how Medicare could modernize the outpatient dialysis payment system.

[http://www.medpac.gov/publications/congressional\\_reports/oct2003\\_Dialysis.pdf](http://www.medpac.gov/publications/congressional_reports/oct2003_Dialysis.pdf)

- MedPAC's comment on revisions to payment policies under the physician fee schedule for calendar year 2004, includes changes in how to pay for services furnished by nephrologists.

[http://www.medpac.gov/publications/other\\_reports/100603\\_RevPhysFeeSched\\_CB\\_comment.pdf](http://www.medpac.gov/publications/other_reports/100603_RevPhysFeeSched_CB_comment.pdf)

### Hospice

- Chapter 6 of the MedPAC June 2004 Report to the Congress: New approaches in Medicare reviews trends and policy issues for the Medicare hospice benefit.

[http://www.medpac.gov/publications/congressional\\_reports/June04\\_ch6.pdf](http://www.medpac.gov/publications/congressional_reports/June04_ch6.pdf)

- The MedPAC May 2002 Report to the Congress: Medicare beneficiaries' access to hospice provides information on beneficiaries' access to hospice care.

[http://www.medpac.gov/publications/congressional\\_reports/may2002\\_HospiceAccess.pdf](http://www.medpac.gov/publications/congressional_reports/may2002_HospiceAccess.pdf)

- Chapter 7 of the MedPAC June 1999 Report to the Congress examines end-of-life care and makes policy recommendations.

[http://www.medpac.gov/publications/congressional\\_reports/Jun99%20Ch7.pdf](http://www.medpac.gov/publications/congressional_reports/Jun99%20Ch7.pdf)

### Durable medical equipment

- Pages 30 and 31 of the March 2002 Report to the Congress provide information about the durable medical equipment benefit.

[http://www.medpac.gov/publications/congressional\\_reports/Mar02\\_Ch1.pdf](http://www.medpac.gov/publications/congressional_reports/Mar02_Ch1.pdf)